

DOCUMENT RESUME

ED 131 905

JC 770 015

AUTHOR Lach, Ivan J.
TITLE The ICCB Computer Based Facilities Inventory & Utilization Management Information Subsystem.
INSTITUTION Illinois Community Coll. Board, Springfield.
PUB DATE 25 Jun 76
NOTE 32p.
EDRS PRICE MF-\$0.83 HC-\$2.06 Plus Postage.
DESCRIPTORS College Buildings; Community Colleges; *Computer Oriented Programs; Educational Facilities; *Facility Inventory; Facility Utilization Research; *Junior Colleges; *Management Information Systems; Space Classification; *Space Utilization; Statewide Planning
IDENTIFIERS Illinois

ABSTRACT

The Illinois Community College Board (ICCB) Facilities Inventory and Utilization subsystem, a part of the ICCB management information system, was designed to provide decision makers with needed information to better manage the facility resources of Illinois community colleges. This subsystem, dependent upon facilities inventory data and course enrollment data submitted by each institution, is capable of providing detailed inventory data and complex utilization analysis for all forty-nine community college campuses in Illinois. The facilities inventory provides data on building size, year of construction, construction cost, replacement value, and the assignable and non-assignable space by type, type of structure, and condition. Data on each room includes size in square feet, room use code, primary instructional area for which the room is used, number of stations in the room design, actual number of room stations, and special equipment code. The utilization report provides data on actual utilization as compared to a predetermined standard. Basic design principles of the subsystem and illustrative reports generated by the subsystem are reviewed in this brief report.
(Author/JDS)

* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *

ED131905

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

THE ICCB COMPUTER BASED
FACILITIES INVENTORY & UTILIZATION
MANAGEMENT INFORMATION SUBSYSTEM

Ivan J. Lach
June 25, 1976

Jc 770 015

INTRODUCTION

Since both the state and the local community college districts invest a great deal of money into the construction and maintenance of facilities at the community colleges, data about facility inventory and utilization is greatly needed for management purposes at both the state and local levels. The ICCB Facilities Inventory and Utilization Subsystem is designed to provide this type of data about all on-campus facilities at all the 39 community college districts (49 separate campuses) that are presently in the public community college system of Illinois.

The ICCB Computer Based Facilities Subsystem is only one segment of a comprehensive statewide management information which is being developed by the Illinois Community College Board (ICCB). The ICCB Management Information System was initiated in response to an expressed need for more reliable and timely data about the operations and outcomes of the community colleges in Illinois by the various state agencies and the legislature.

The total ICCB MIS consist of the following subsystems:

- Course and Curriculum Inventory
- Course Enrollment and Apportionment Processing
- Budget Planning System
- Institutional Characteristics System
- Office Operations & Accounting System
- Facilities Inventory and Utilization
- Faculty and Staff Inventory and Utilization
- Student-Based Policy Analysis System

DESIGN PRINCIPLES

To have accurate facility utilization, it is essential to have an inventory of facilities because not all rooms are classrooms and significant parts of college buildings cannot be used for instruction. In addition,

student enrollments must be related to course which must be related to rooms against a complex calendar and time framework. This is a complex task, particularly in a comprehensive community college where team teaching, audio-visual self instruction, open laboratories and variable entry-variable exit enrollment requires special utilization accounting techniques.

The facilities inventory data is designed in a hierarchial structure with buildings classified within facilities and rooms classified within buildings. All classifications are based on nationally accepted standards developed by the National Center for Higher Education Management Systems (NCHEMS) and documented in the Higher Education Facilities Inventory and Classification Manual (Technical Report 36). The inventory provides data about the size of each building, the year of construction, cost of construction, replacement value, the assignable and non-assignable space by type, type of structure, and condition. Data on each room includes the size in square feet, room use code, primary instructional area for which room is used, the number of stations for which the room was designed, the number of actual stations in the room, and special equipment code.

Student enrollment and course resource data are reported by each community college to the ICCB based on midterm counts. These enrollments are also utilized for state funding claim verifications and must be able to withstand an audit. In addition to the student enrollment data, the colleges report the following data for each section of a course: instructional term, course section beginning date, course section ending date, instructional type, location facility, location building, location room number, class meeting days, class meeting time - from, class meeting time - to, instructor I.D. number and instructor FTE.

To accurately reflect the utilization rates of facilities in the community colleges of Illinois, several unique features were designed into the Facilities Inventory and Utilization Subsystem. For example, provisions were made for indicating when two or more courses meet at the same time and in the same room which allows the programs to count the students in both courses for the utilization of that room. Open laboratories are reported in a special way which indicates what particular days and time of day these laboratories are in an 'Open' status. This feature enables the utilization programs to count those particular hours as hours in which that 'Open Laboratory' is in use. Student hours produced under an 'Open' or 'to be arranged' schedule can be counted toward utilization in most situations, also. In this case, the minimum number of hours per week that a student is expected to spend in the 'Open' or 'to be arranged' schedule is reported. This enables the utilization programs to credit this additional weekly student hours of use to the appropriate room which is usually an open laboratory.

The system diagrams on the next page show that the inventory reports are produced directly from the inventory file, however, most of the utilization reports require an interface between the course enrollments master file and the inventory master file.

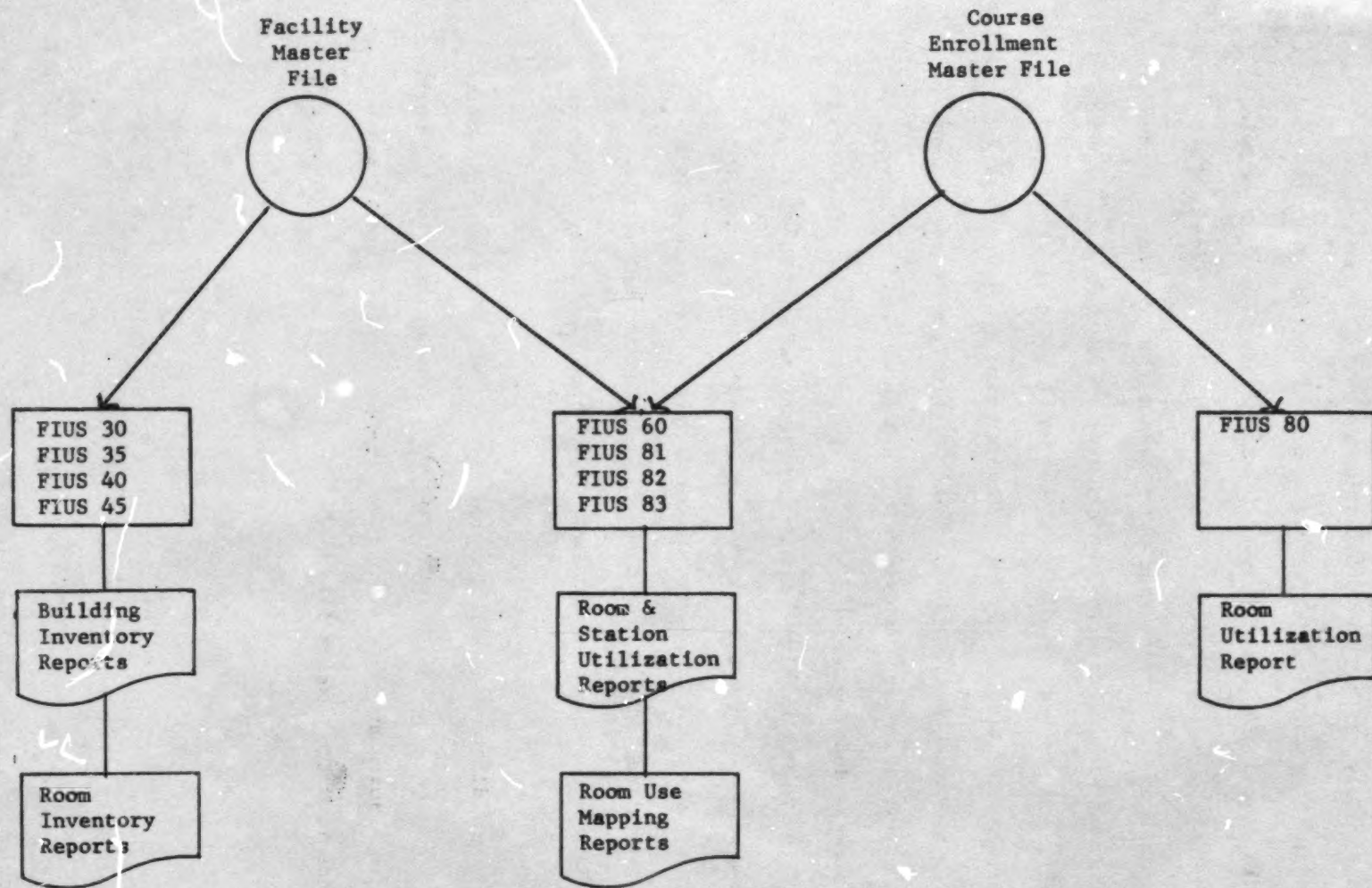


FIGURE 1

SYSTEM FLOW
FACILITIES INVENTORY AND UTILIZATION

FACILITIES INVENTORY REPORTS

The data on the facilities inventory programs is often needed in a report format. Four basic inventory computer programs have been developed to produce the desired inventory reports. These reports provide basic inventory data which is summarized for facilities, buildings and rooms. The basic inventory reports are the Facilities Inventory Report, Building Inventory Report, Room Inventory Report, Inventory Report by Room Type, and a Campus Facility Inventory Summary Report.

The inventory reports are used by the ICCB staff, the Illinois Board of Higher Education staff and the Capital Development Board staff in their work with evaluating capital budget requests and facilities master plans of the community colleges. In addition, these reports are useful to the ICCB staff in evaluating whether or not a college has adequate facilities to house new programs which the college may be requesting.

The inventory data is useful to the local college not only for providing data to the various state and federal agencies but also for planning the colleges own facilities master plan, for planning needed new facilities or needed remodeling, for studies designed to show the efficiency factor of buildings, for studies in comparing the actual use of facilities with the intended use when the facility was built and for estimating operating and maintenance costs.

Two sample inventory reports are shown on the next two pages. Page 6 contains a sample of an Inventory Report by Room Type. The room type code 110 designates classrooms while code 210 is for class laboratories. The report on page 7 shows a summary facilities inventory report for a college. This report shows the number of assignable square feet and gross square feet of space for the college by condition, ownership,

511-01 ROCK VALLEY

FACILITY	BLDG	ROOM	ROOM USE DESC	PROGRAM ID CAT	ORGANIZATION UNIT	ASSIGNABLE SQ FEET	STATION TYPE	SUITA- BILITY	ACCESS- ABILITY	SPEC EQUIP	CAPACITY DESIGN	ACTUAL	INVENTORY DATE
BUILDING TOTAL						8,311					508	382	
FACILITY TOTAL						8,311					508	382	
ONCII	CL-II	120	110	11 0000		688		S	Y		40	38	06/15/75
ONCII	CL-II	121	110	11 0000		688		S	Y		38	38	06/15/75
ONCII	CL-II	124	110	11 0000		688		S	Y		46	38	06/15/75
ONCII	CL-II	125	110	11 0000		688		S	Y		41	38	06/15/75
ONCII	CL-II	126	110	11 0000		688		S	Y		38	38	06/15/75
ONCII	CL-II	128	110	11 0000		688		S	Y		41	38	06/15/75
ONCII	CL-II	129	110	11 0000		688		S	Y		42	38	06/15/75
ONCII	CL-II	219	110	11 0000		780		S	Y		20	20	06/15/75
ONCII	CL-II	222	110	11 0000		676		S	Y		41	37	06/15/75
ONCII	CL-II	229	110	11 0000		676		S	Y		37	37	06/15/75
BUILDING TOTAL						6,948					384	360	
FACILITY TOTAL						6,948					384	360	
ONCPE	PEC	G38	110	11 0000		735		S	N		35	40	06/15/75
BUILDING TOTAL						735					35	40	
FACILITY TOTAL						735					35	40	
ONCRC	ERC	G21	110	11 0000		2,714		S	Y		75	50	06/15/75
ONCRC	ERC	PAR	110	51 0000		2,968		S	Y		222	0	06/15/75
BUILDING TOTAL						5,682					297	50	
FACILITY TOTAL						5,682					297	50	
ROOM TYPE TOTAL						36,086					2,127	1,539	
ONCA	BLDG-A	030	115	90 0000		22		S	Y		0	0	06/15/75
ONCA	BLDG-A	031	115	90 0000		40		S	Y		0	0	06/15/75
ONCA	BLDG-A	032	115	90 0000		211		S	Y		0	0	06/15/75
BUILDING TOTAL						273					0	0	
FACILITY TOTAL						273					0	0	

9 511-01 ROCK VALLEY

FACILITY	BLDG	ROOM	ROOM USE DESC	PROGRAM ID CAT	ORGANIZATION UNIT	ASSIGNABLE SQ FEET	STATION TYPE	SUITA- BILITY	ACCESS- ABILITY	SPEC EQUIP	CAPACITY DESIGN	ACTUAL	INVENTORY DATE
ONCATC	ATC	027	115	12 0000		58		S	Y		0	0	06/15/75
BUILDING TOTAL						58					0	0	
FACILITY TOTAL						58					0	0	

and year of construction. This particular report was designed to provide inventory data required by the IBHE Space Survey.

ILLINOIS COMMUNITY COLLEGE BOARD
BUILDING INVENTORY FOR NONRESIDENTIAL FACILITIES

INSTITUTION:	PARA- GRAPH NO.	DATA CATEGORY	LINE NO.	ASSIGNABLE AREA (IN SQUARE FEET)	GROSS AREA (IN SQUARE FEET)
		CONDITION			
	4.2.1	SATISFACTORY	1	141,063	203,443
	4.2.2	REMODELING A	2		
	4.2.3	REMODELING B	3		
	4.2.4	REMODELING C	4		
	4.2.5	DEMOLITION	5	879	988
	4.2.6	TERMINATION UNSPECIFIED	6 7		
		OWNERSHIP			
	6.2.1	OWNED FSE SIMPLE	8	36,004	41,934
	6.2.2	INSTITUTION AMORTIZING	9	35,413	54,000
	6.2.3	HOLDING COMPANY AMORTIZING	10	68,825	108,489
	6.2.4	LEASED OR RENTED	11		
	6.2.5	NOMINAL RATE	12		
	6.2.6	NOT OWNED, SHARED NON-POSTSECONDARY	13		
	6.2.7	NOT OWNED, SHARED OTHER POSTSECONDARY	14		
	6.2.8	OTHER UNSPECIFIED	15 16		
		YEAR OF CONSTRUCTION			
	5.1	PRE-1900	17		
	5.1	1900-1930	18		
	5.1	1931-1950	19		
	5.1	1951-1960	20		
	5.1	1961-1965	21		
	5.1	1966-PRESENT	22	141,942	204,403
		UNSPECIFIED	23		
		TOTAL (SUM OF LINES 1-7, 8-16, 17-23)		141,942	204,403

FACILITIES UTILIZATION PROGRAMS

The utilization programs for facilities interface the facilities inventory file with the course enrollment file to obtain the necessary data to calculate the various utilization rates desired. The basic utilization program FUIS 60 displays all course sections which were reported as being taught in a given term for each classroom in the inventory, shows the number of students enrolled in each course, calculates the number of weekly room hours of usage by course, calculates the number of weekly student hours of usage by course, and calculates the room occupancy utilization rate and station occupancy utilization rate for each room.

This particular program counts all room utilization regardless of time of day or day of week. A predetermined standard expected utilization rate per week is used to calculate the utilization rates. This standard rate is a variable in the program so that the user may select the standard he desires. The ICCB has been experimenting with standard weekly utilization rates ranging from 40 to 75 hours per week. The important feature of using this method in the program is that it gives a college credit for room utilization even if that utilization occurs on weekends or in the middle of the night.

A sample of the report generated by FUIS 60 appears on page 9. The utilization rate in this particular report was 53 hours per week. Hence, to calculate the room occupancy rate, the total weekly room hours are divided by the room utilization rate (53 hours in this case). To calculate the station occupancy rate, the program divides the total weekly student hours by the product of the number of stations times the utilization rate.

FIUS60 UTILIZATION
FINAL RUN

506-01

ILLINOIS COMMUNITY COLLEGE BOARD
ROOM UTILIZATION REPORT

PAGE 9
PROCESSED 10/10/75

FACILITY	BU'LDING	ROOM	TYPE	ASSIGNED SQ FEET	STATIONS	COURSE	SECT	DAYS	TIME	STUDENTS ENROLLED	WEEKLY ROOM HOURS	WEEKLY STUDENT HOURS
						ENG00 0101	D	M W F	1100-1150	30	2.5	75.0
						ENG00 0201	A	M W F	1200-1250	27	2.5	67.5
						PSY00 0275	A	T H	1215-1530	23	6.5	149.5
						PSY00 C100	M	W	1300-1350	14	.8	11.7
						EC000 0211	A	T H	1345-1500	15	2.5	37.5
						HSV00 0210	C	M	1530-1620	3	.8	2.5
						BUS00 0112	N	M	1900-2150	26	2.8	73.7
						EC000 0211	N	M	1900-2150	16	2.8	45.3
						GOV00 0164	N	W	1900-2150	15	2.8	42.5
						R00M OCC.		56.2%	STA. OCC.	29.5%	29.8	626.0
ONC1	1	2L05		600	40	SOC00 0115	A	M W F	0900-0950	35	2.5	87.5
						SPE00 0131	D	T H	0930-1045	24	2.5	60.0
						SCC00 0116	A	M W F	1000-1050	14	2.5	35.0
						PSY00 0100	L	M	1100-1150	18	.8	15.0
						ART00 0119	A	T H	1215-1330	22	2.5	55.0
						SCC00 0111	B	M W F	1300-1350	24	2.5	60.0
						SOC00 0115	H	T H	1345-1500	6	2.5	15.0
						PSY00 0100	J	W	1400-1530	17	1.5	25.5
						ENG00 0101	K	M	1600-1850	34	2.8	96.3
						ART00 0119	N	W	1900-2150	18	2.8	51.0
						ENG00 0100	N	T	1900-2150	10	2.8	28.3
						HSV00 0130	N	M	1900-2150	28	2.8	79.3
						SOC00 0115	H	H	1900-2150	30	2.8	85.0
						R00M OCC.		59.1%	STA. OCC.	32.7%	31.3	692.9
ONC1	1	2L07*		600	40	ENG00 0101	B	M W F	0900-0950	32	2.5	80.0
						ENG00 0101	C	M W F	1000-1050	32	2.5	80.0
						ENG00 0101	E	M W F	1200-1250	29	2.5	72.5
						HIS00 0221	A	M W F	1200-1250	22		55.0
						PSY00 0251	A	T H	1215-0130	33	21.5	709.5
						ENG00 0270	A	M W F	1300-1350	18	2.5	45.0
						HSV00 0210	A	H	1345-1500	3	1.3	3.8
						SPE00 0131	H	W	1600-1900	10	3.0	30.0
						BUS00 0101	NA	M	1900-2150	22	2.8	62.3
						BUS00 0112	NA	H	1900-2150	28	2.8	79.3
						ENG00 0101	N	T	1900-2150	21	2.8	59.5
						SPE00 0131	N	W	1900-2150	21	2.8	59.5
						R00M OCC.		7.5%	STA. OCC.	3.9%	4.0	82.0
ONC1	1	2M05		600	40	BUS00 0101	A	M W F	0900-0950	23	2.5	57.5
						HSV00 0101	A	T H	0930-1045	30	2.5	75.0
						SPE00 0131	A	M W F	1000-1050	23	2.5	57.5
						SPE00 0131	B	M W F	1100-1150	24	2.5	60.0
						SPE00 0131	C	M W F	1200-1250	28	2.5	70.0
						ENG00 0101	F	M W F	1300-1350	32	2.5	80.0
						ENG00 0101	J	T H	1345-1430	19	1.5	28.5
						ENG00 0101	G	M W F	1400-1450	31	2.5	77.5
						HSV00 0210	B	M	1530-1620	11	.8	9.2

CLASSES TAUGHT DURING 10/10/75 TO 10/20/75

ROOM UTILIZATION RATE = 53 HOURS

FIUS 60 also has the capability of accurately calculating room utilization for 'Open' laboratories and 'to be arranged' or open schedules. The sample report on page 11 illustrates how the program calculates weekly student hours (see (1) and (2) in the report) from courses which have 'to be arranged' (TBA) schedules and weekly room hours for the room when the room is used as an 'Open' laboratory (see (3) in the report). As can be seen in the report, the TBA situation is reported for the various sections of MATH 220 and for PHYS 280. These courses use computer assisted instruction which is offered in room A100 from 10:00 A.M. to 2:00 P.M. each day on an 'open' basis. An instructor is also assigned to this room to assist the students during these times. Each student was expected to spend three hours per week in the self-instructional room for the MATH 220 and four hours per week for the PHYS 280.

Adding the 20 hours per week that this room is used in an 'Open laboratory' situation and additional 310 weekly student hours produced by the 'open' schedule classes increased the room occupancy rate from 37.7% to 74.5% and the station occupancy rate from 32.7 to 52.2%. This is a very significant improvement over utilization programs which consider 'open laboratories' to be unused and stations which are utilized by students with 'open' schedules to be completely unoccupied.

ILLUSTRATION OF "OPEN" CLASSROOMS AND "TO BE ARRANGED"
SCHEDULES UTILIZATION ON FIUS60 FOR ONE ROOM

ROOM	TYPE	SQ. FEET	STATIONS	COURSE	SECT.	DAYS	TIME	STUDENTS	WEEKLY ROOM HOURS	WEEKLY STUDENT HOURS
ONCL A 100	110	700	30	MATH 100	A	M W F	0800-0930	30	4.5	135.0
				MATH 200	A	T H	0800-0930	20	3.0	60.0
			③	*OPEN 57	1	MTWTF	1000-1400	-	20.0*	--
				MATH 220	B	OPEN	0300 HRS-TBA	25	--	75.0*
				MATH 220	C	OPEN	0300 HRS-TBA	15	--	45.0*
				MATH 220	D	OPEN	0300 HRS-TBA	30	--	90.0*
				MATH 220	E	OPEN	0300 HRS-TBA	20	--	60.0*
				PHYS 110	A	MTWTF	1420-1520	25	5.0	125.0
				PHYS 280	B	T H	0400 HRS-TBA	10	--	40.0*
				HIST 100	N	M W	1800-2000	26	4.0	104.0
				HIST 102	C	T H	1800-2000	24	4.0	96.0
				ROOM OCC.					40.5	830.0
				ROOM OCC.					74.5%	STA. OCC. 52.2%

Note: Without the "Open Lab" and the
"TO BE ARRANGED" features the
Utilization Rates would be:
ROOM OCC = 37.7%
STA OCC = 32.7%

ROOM UTILIZATION RATE = 53 HOURS

FIUS 60 is a detailed report showing utilization rates for each individual room. For this reason, it is primarily intended for local college use. This report enables a detailed study of room utilization by college personnel. A summary report for FIUS 60 was developed to provide data for the IBHE Space Survey and to serve the needs for state agency use.

This summary report shows the number of rooms and stations for class rooms and class laboratories only and the utilization of these rooms and stations by day, evening, weekends, and undesignated times. Using this basic data, the program calculates the percent station utilization and percent room utilization for the specified hours of 7:00 A.M. to 5:00 P.M., Monday through Friday (50 hrs. per week), 5:00 P.M. to 10:00 P.M., Monday through Friday (25 hours per week), and the weekly standard (40 hours in this case). The weekly standard calculation includes all the various utilization during the week and compares this to an expected weekly standard. The sample summary report on the next page shows the merits of the various features which were designed into this utilization program. Weekly student hours generated in "to be arranged" schedules are shown in the undesignated time category and are a very substantial portion in this case. Likewise, "open laboratories" are included in the weekly room hours. Note also the substantial utilization which is made of the facilities during the weekends by this particular community college. When calculating the utilization of the traditional college "day" (7:00 A.M. to 5:00 P.M.), the room utilization is 62.1% and the station utilization is 46.8%, however, calculating the utilization based on the weekly standard (40 hours in this example), showed a room utilization of 118.5% and a station utilization of 87.9%. The room utilization rate of over 100% simply indicates that the rooms are used on an average of more than 40 hours per week in this example. The important feature of this method is that it accounts for all usage regardless of time of day or day of week. Hence, an institution is not penalized for being innovative.

FIUS60 FIFTY NIN HOUR
TERM UTL FALL

ILLINOIS COMMUNITY COLLEGE BOARD
SURVEY DATA FOR CLASSROOM FACILITIES

PAGE 2
PROCESSED 05/04/76

INSTITUTIONS:

	NUMBER OF ROOMS	NUMBER OF STATIONS	WEEKLY STUDENT HOURS				WEEKLY ROOM HOURS		
			7AM-5PM	5PM-10PM	WEEKENDS	UNDESIG	7AM-5PM	5PM-10PM	WEEKENDS
CAMPUS TOTAL									
CLASSROOM	49	2,203	51,662.0	20,052.2	5,810.6	49.2	1,523.4	658.1	141.2
CLASS LABORATORY	46	1,159	20,386.7	7,976.5	508.0	1,669.2	996.5	409.7	24.9
			PERCENT STATION UTILIZATION				--PERCENT ROOM UTILIZATION--		
			7AM-5PM	5PM-10PM	WEEKLY STANDARD (40) HRS		7AM-5PM	5PM-10PM	WEEKLY STANDARD (40 HRS)
CLASSROOM			46.8	36.3	87.9		62.1	53.7	118.5
CLASS LABORATORY			35.1	27.5	65.8		43.3	35.6	77.7

CLASSES TAUGHT DURING APPORTIONMENT PERIOD

ROOM UTILIZATION RATE = 40 HOURS

The second type of classroom usage programs produces reports showing the number and percentage of classrooms used at each college by day of week and by time of day. Two different programs are included in this group FIUS 80 and FIUS 81. One program (FIUS 80) utilizes only data submitted on the courses enrollment cards and hence, uses all rooms reported on these cards regardless of type. The other program (FIUS 81) utilizes both the facilities inventory and the course enrollment data and hence, has options for using only rooms which are coded as being classrooms or class laboratories in the calculations of utilization. Both programs have control card options for varying the format of the report to meet the user's requirements.

These classroom usage reports give an overall weekly view of room utilization for each college. This feature makes the report very useful for analyzing utilization patterns and scheduling problems which effect utilization at the local college level. In addition, these reports give a summary view of the colleges utilization rate for state agency use.

The sample report on the next page shows an FIUS 81 utilization report for all on-campus classrooms and class laboratories for a community college during the Fall 1975 term.

The ICCB staff has prepared a special manual designed to assist the users in selecting desired facility reports as well as the desired options on each report. The manual is the ICCB Facility Inventory and Utilization System User's Handbook, January 1976.

FIUS81
TEST CAMPUS RANG

ILLINOIS COMMUNITY COLLEGE BOARD
FACILITY UTILIZATION REPORT

DISTRICT	CAMPUS	NAME	TOTAL NUMBER OF HOURS ROOMS ARE USED PER WEEK 828	TOTAL NUMBER OF DIFFERENT ROOMS REPORTED 56
----------	--------	------	---	---

-----NUMBER AND PERCENT OF ROOMS USED-----

TIME	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	TOTAL	-- MON THRU FRI ONLY--		
									LOW	MEAN	HIGH
07-08								0	0	0.00	0
08-09		6 11%	6 11%	6 11%	5 9%	7 13%		30	5	6.00	7
09-10		21 38%	21 38%	19 34%	19 34%	21 38%		101	19	20.20	21
10-11		23 41%	20 36%	23 41%	18 32%	23 41%		107	18	21.40	23
11-12		15 27%	3 5%	14 25%	2 4%	14 25%		48	2	9.60	15
12-13		13 23%	13 23%	13 23%	12 21%	11 20%		62	11	12.40	13
13-14		19 34%	18 32%	20 36%	18 32%	14 25%		89	14	17.80	20
14-15		14 25%	11 20%	14 25%	13 23%	13 23%		65	11	13.00	14
15-16		6 11%	3 5%	2 4%	5 9%	3 5%		19	2	3.80	6
16-17		7 13%	4 7%	4 7%	7 13%	1 2%		23	1	4.60	7
TOT DAY		124	99	115	99	107		544	0	10.88	23
									-- MON THRU THUR ONLY--		
17-18		6 11%	4 7%	4 7%	5 9%			19	4	4.75	6
18-19		10 18%	6 11%	6 11%	6 11%			28	6	7.00	10
19-20		21 38%	19 34%	22 39%	19 34%			81	19	20.25	22
20-21		21 38%	19 34%	22 39%	19 34%			81	19	20.25	22
21-22		19 34%	18 32%	19 34%	19 34%			75	18	18.75	19
TOT EVE		77	66	73	68			284	4	14.20	22

AFT 22	FIUS81 Used Rooms On Facilities File that are Classrooms Only.	0	-- MON THRU THUR ONLY--		
		0	0	0.00	0
BFR 07	Options are Available for Different Time and Day Groupings.	0	0	0.00	0

ROOM USE MAPPINGS

The last set of facility utilization programs are classified as room use mappings. These programs were designed to give a quick visual view of what type of utilization is occurring in each room at a college each hour of the day and each day of the week. These programs resemble the pegboard schedules that are present in the offices of many deans of instruction. However, these programs do considerable more than just show whether or not a room is being used. The first of these programs, FIUS 82, shows a room use mapping by instructional type and by room type. A sample report of FIUS 82 appears on page 17. This report enables the analysis of room design with actual usage in addition to utilization.

The other room use mapping program, FIUS 83, displays the size of the class in each room visually. An option to FIUS 83 enables a visual display of percent station utilization in each room. These reports are very useful for the purpose of getting a quick overall view of room utilization as well as for analyzing the scheduling patterns and practices at a given college. Rooms which have much larger capacity than the classes which occupy them are easily spotted on either of the FIUS 83 reports. The sample reports of FIUS 83 on page 18 is shown with the class size option while the report on page 19 was produced using the percent of stations occupied option. The codes used on each report are shown at the bottom of each page of the printout.

506-01

					MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
					000111111111222 7890123456789012	000111111111222 7890123456789012	000111111111222 7890123456789012	000111111111222 7890123456789012	000111111111222 7890123456789012
FACILITY	BUILDING	ROOM	TYPE	SEATS					
CNC1	1	1B01	110	40	L	XXXX	L	XXXX	L
CNC1	1	1C02	110					LL	
CNC1	1	1K04	110	126	LLL	LLL	LL LL	LL LL	LLL
CNC1	1	2C03	110	40		XXX			
CNC1	1	2C06	110	72	LLLLL	LLLLLLLLL	LLLLL L	LL LLLLLL	LLLLL L
CNC1	1	2C10	110	30					LLL
CNC1	1	2C14	110	30	LL LLL		LL LLL	LL	L LLL
CNC1	1	2C3A	110	50					
CNC1	1	2D01	110	40	LLL L	XXX	LLL L	LL LL LL DDD	LLL L
CNC1	1	2D03	110	40	LL L	XXX	LL L	LL	LL L
CNC1	1	2D13	110	35	LL L	LLL	LL L	LL	LL L
CNC1	1	2D15	110	35	LL LL	DDD	LL	LL LL LLLLLL	LL LL
CNC1	1	2G03	110	40	L LXX		L LXX	XX	L L X
CNC1	1	2L03	110	40	LLLL SS	LLL	LL LLLL	LL	LL L
CNC1	1	2L05	110	40	LLL L	LLLLLL	LL LLL	LL LLL	LL L
CNC1	1	2L07	110	40	LL LL	LLL	LL LL	LL LLL	LL L
CNC1	1	2M05	110	40	LLLLLLSS		LLLLLL	LL	LL L
CNC1	1	2M07	110	40	LLLLL	LL	LLLLL	LL	LL L
CNC1	1	3E12	110	72	LLL LL	LLL	LL LL	LL	LL L
CNC1	1	3M02	110	28	L	XX	LL LL	LL	L
CNC1	1	3M10	110	40	LLL	LLL	LLL XX	LLL	LLL
CNC3	3	1W10	110					LL XX	XXXX
CNC3	3	1W15	110						
CNC3	3	1W19	110						
CNC1	1	4K02	210						
CNC1	1	4L01	210	20					
CNC1	1	4L03	210						
CNC1	1	1A01	210	33	XX LL	XXXX	XX LL	XXXX	XX XXX
CNC1	1	1E02	210						
CNC1	1	1E04	210	20					
CNC1	1	1E03	210	18	LLLLLL	LLL	LLLLLL	LLL	LLLLLL
CNC1	1	1F10	210			LLLLLLLLLLLLLLL		LLLLLLLLLLLLDDD	LLLLLL
CNC1	1	1G04	210	24	LL	DDDD	LL	LL	LL
CNC1	1	1M01	210	257	L LL		L LL	LL	LL
CNC1	1	1M24	210	50	L L		L L	LL	LL
CNC1	1	2E01	210	20	L L LLL		L L L	LL LLL	L L LL
CNC1	1	2E08	210	35		LLLLLL		XXXX	
CNC1	1	2E12	210						
CNC1	1	2F01	210	28		XXX		XX	
CNC1	1	2F08	210	20				XXX	
CNC1	1	2G10	210	38	L LL		L LL		L LL
CNC1	1	2H05	210	30	LL LL		LL LL	LLL	LL LL
CNC1	1	2K11	210	24	XX	XXXX	XX	XXXX	XXX
CNC1	1	2M09	210	28	L L	LLL	XXXLL	LLL	L L
CNC1	1	3E04	210	24	L		LLL LLLL	LLL	L
CNC1	1	3E10	210	24			XXX XX		

INSTRUCTIONAL TYPE CODE

L = Lecture
D = Discussion/Lecture

S = Seminar

X = Lab/Lab - Discussion

CLASSES TAUGHT DURING APPORTIONMENT PERIOD 3

I = Independent Study

E = Internship

A = Audio-Visual

T = Television/Open

O = Other

Page 16

BLANK INDICATES ZERO USAGE

					MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
					000111111111222 7890123456789012	000111111111222 7890123456789012	000111111111222 7890123456789012	000111111111222 7890123456789012	000111111111222 7890123456789012
FACILITY	BUILDING	ROOM	TYPE	SEATS					
CNC1	1	1001	110	40	+	0000	+	0000	+
CNC1	1	1C02	110					XX	
CNC1	1	1K04	110	126	++	XX	++	XX	++
CNC1	1	2C03	110	40			++		
CNC1	1	2C05	110	72	++++	X-++CCO	++++	X	000
CNC1	1	2C10	110	30					
CNC1	1	2C14	110	30	--	+-X	--	+-X	--
CNC1	1	2C3A	110	50					
CNC1	1	2D01	110	40	++	+	++	+	++
CNC1	1	2D03	110	40	+C	-	+C	-	+C
CNC1	1	2D13	110	35	-O	+	-O	+	-O
CNC1	1	2D15	110	35	+-	O+	+-	O+	+-
CNC1	1	2G03	110	40					
CNC1	1	2L03	110	40	++	XX	++	XX	++
CNC1	1	2L05	110	40	C-	+	CCO++		
CNC1	1	2L07	110	40	OO	O-	++		
CNC1	1	2M05	110	40	++	CO-	++		
CNC1	1	2M07	110	40	++	+	++		
CNC1	1	3F12	110	72	++	+	++		
CNC1	1	3M02	110	28	++	+	++		
CNC1	1	3M10	110	40	+C	+	++		
CNC3	3	1M10	110						
CNC3	3	1M15	110						
CNC3	3	1M19	110						
CNC1	1	9K02	210						
CNC1	1	9L01	210	20					
CNC1	1	9L03	210						
CNC1	1	1A01	210	33	++	XX	XXXX		
CNC1	1	1E02	210						
CNC1	1	1E04	210	20					
CNC1	1	1E09	210	18	CCCCCO	000	++000000000000	000000	000000
CNC1	1	1F10	210						
CNC1	1	1G04	210	24	-+	XX	++++		
CNC1	1	1M01	210	257					
CNC1	1	1M24	210	50	O	XX			
CNC1	1	2E01	210	20	O	+	OCO		
CNC1	1	2E08	210	35			X++XXX		
CNC1	1	2F12	210						
CNC1	1	2F01	210	28			++		
CNC1	1	2F09	210	20			0000		
CNC1	1	2G10	210	35	-	++			
CNC1	1	2H06	210	30	X-				
CNC1	1	2K11	210	24		CO	++++		
CNC1	1	2M09	210	28					
CNC1	1	3E08	210	24					
CNC1	1	3E10	210	24					

CLASSES TAUGHT DURING APPORTIONMENT PERIOD 3 X UP THRU 25 - UP THRU 50 + UP THRU 75 O ABOVE 75 BLANK INDICATES ZERO USAGE

CONCLUSION

This paper attempted to describe the ICCB Computer Based Facilities Inventory and Utilization Subsystem by explaining the context of this subsystem in relation to the total ICCB MIS development, reviewing the basic design principles of the subsystem, and illustrating sample reports which the subsystem generates. The subsystem is depended upon facilities inventory data and upon course enrollment data. The facilities inventory data remains rather constant for most colleges from term to term and hence, requires little maintenance. The course enrollment data is reported by the colleges to the ICCB each term and serves as basic data for verification of state funding claims in addition to providing the enrollment data for facilities utilization. Hence, although initiating this subsystem required a great amount of effort on the part of the ICCB staff and the community college personnel, the subsystem will be capable of providing inventory and space utilization reports each term using data that is being submitted by the colleges to serve several other purposes in addition to space utilization.

The ICCB Facilities Inventory and Utilization Subsystem was not simply adapted from a system in use at universities but was uniquely designed to accurately reflect the utilization in the comprehensive community colleges of Illinois. Features which provide for the calculation of accurate utilization of 'open' laboratories, to be arranged or open schedules, variable entry-variable exit, and classes being taught in conjunction with other classes are examples of the unique capabilities of this particular subsystem.

The facilities inventory and utilization reports were designed for use by both the local colleges and state agencies. Some reports are very detailed which is ideal for local college staffs doing detailed analysis while others provide an overall visual view of room utilization which can be understood by the general public. In addition, each of the reports are designed with a great number of control card options which enable the user to vary the format on each report to his specific needs.

The ICCB Facilities Inventory and Utilization Subsystem is capable of providing detailed inventory data and complex utilization analysis for all 49 public community college campuses in Illinois on a routine basis each term. This data will be available not only for use by the ICCB and other state agencies in making decisions on community college capital budget requests but also to local community college personnel for use in analyzing their own space utilization. Several of the programs are specifically designed for use by local colleges. A few community colleges have already identified some unique uses of these programs to help them get more utilization from their existing space. As more colleges make use of these programs, many more unique uses will be identified.

The ICCB Facilities Inventory and Utilization Subsystem was developed to provide decision makers with needed information to better manage the facilities resources of the community colleges in Illinois. With fast growing enrollments in the community colleges and limited financial resources for additional capital projects, improved space utilization is very vital. We think that the ICCB Facilities Subsystem is a very useful tool to assist in the achievement of this goal.